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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/816,529	03/23/2001	Paul G. Clemmer	30-4336 (4510)	8030

7590 09/29/2004

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EXAMINER

MANOHARAN, VIRGINIA

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 09/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/816,529	Applicant(s) CLEMMER, PAUL G.	
	Examiner Virginia Manoharan	Art Unit 1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2004.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-7,12-14,16 and 17 is/are rejected.
- 7) ☒ Claim(s) 1-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED OFFICE ACTION

Upon reconsideration, claims 12-19 are hereby rejoined and now fully examined. Since all claims previously withdrawn from consideration under 37 CFR 1.142 have been rejoined, the restriction requirement made on February 6, 2002 is hereby withdrawn.

The Declaration under 37 CFR 1.131, filed on January 8, 2004, is sufficient to overcome the effective date of the Yokoyama's reference of Feb 21, 2001.

Claims 1-19 are objected to because of the following informalities:

- a) In claim 3, lines 5, "wherein step of supplying" should be --wherein the step of supplying-- as said step is already recited in the base claim.
- b) The inconsistent used of terminology in the claims is improper. For examples only:
  - 1) "Fluorination" in claim 3, line 6, as opposed to "fluorination reaction" in claim 1, line 8.
  - 2) the "said impurity" in claim 12, lines 8 & 10, as opposed to "at least one impurity" recited in claim 12, line 3.
- c) The preamble of claim 12 should recite a separation or purification process since there is no "preparing" or reaction recited in the body of the claim.
- d) The claimed "said device" in claim 19 lacks antecedent support.
- e) Claim 17, lines 9-16 should be recited more in structural languages, rather than in process languages especially since the claims are directed to apparatus.

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e) The numerously recited phrase "adapted to" in claim 17 should be deleted as it is not ascertained whether the reaction, for example, do in fact facilitate fluorination of the chlorinated organic compound with the recitation of "adapted to".

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 & 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wo '660 in view of Dattani et al or (5,200,431) or Tsuda et al (6,346,172).

WO '660 is applied for the same reasons as set forth at page 2 of the Final Office Action, dated 08/04/03. The step of supplying at least a portion of said extractive agent stream to a fluorination reaction which produced said difluoromethane, as broadly claimed in claim 1, is known in the art as taught by Dattani. Note e.g., col. 3, lines 22-25 and at col. 6, lines 53-56 of the Dattani's reference. See also Tsuda et al at col. 5, lines 25-33. To incorporate the process of Dattani or Tsuda to WO '660 process would have been obvious to one of ordinary skill in the art especially in view of Dattani's suggestion provided at col. 2. lines 4 – 20 .[Compare the Dattani's said suggestion with the recitation in the specification at page 4, lines 3-5, i.e. , the applicability of the process to any mixture containing, e.g., a chlorine –containing halogenated hydrocarbon. Tsuda also suggest that the product is effectively used when recycled to the reaction step, (col. 5, lines 29-33).

Claims 12-14 & 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO '660 in view of Cerri et al (5,800,682)

WO '660 is disclosed supra. Cerri is applied to teach that the apparatus and method of obtaining a sidestream and supplying a portion of said sidestream to fluorination is known in the art. See e.g., col. 2, lines 51-64 and col. 3, lines 1-34 of Cerri. To incorporate the process of Cerri to Wo '660 process would have been obvious to one of ordinary skill in the art in order to avoid build-up of the sidestream inside the column and little or none of the sidestream goes to the column reboiler. See e.g., col. 2, lines 50-55 of the Cerri et al reference. Moreover, see Fig. 1 of WO'660 which shows the recycling of a bottom stream to the distillation column.

Claims 3, 8-11, 15 & 18-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a) Clemmer et al '708 and '580 both disclose a process for the production of difluoromethane.
- b) Ramanathan et al discloses a process for the production of difluoromethane.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Virginia Manoharan whose telephone number is 571-

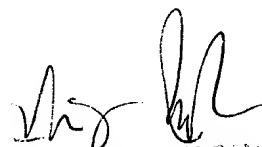
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271-1450. The examiner can normally be reached on Tuesday-Friday from 7:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

V. Manoharan/af  
September 2, 2004

  
VIRGINIA MANOHARAN  
PRIMARY EXAMINER  
ART UNIT 1237 764